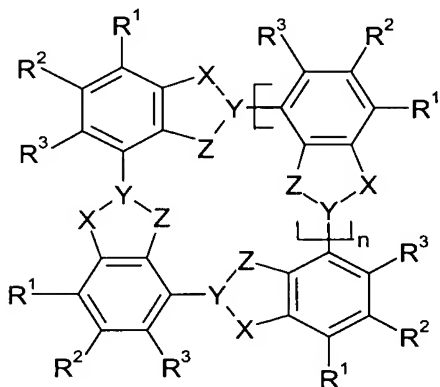


# AMENDMENTS TO THE CLAIMS

Please amend claims 1, 2 and 6, and add new claims 15-21, as follows:

Claim 1 (Currently Amended) A composition comprising:

a cyclic compound represented by the formula (I) and at least one tautomeric structure thereof



or at least one metal complex of the cyclic compound

or at least one complex of the cyclic compound with mineral acids, chloride, sulfate, bisulfate, phosphate, hydrogen phosphate, nitrate,  $\text{BF}_4^-$  or methanesulfonate being present as opposite ions  $\text{X}^-$  in the case of cationic cyclic structures,

wherein

$n$  is a number in the range from 1 to 7,

$\text{X-Y-Z}$ , in each case independently of one another, is  $\text{O-C=N}$ ,  $\text{N=C-O}$ ,  $\text{NR}^5\text{-C=N}$ ,  $\text{N=C-NR}^5$ ,  $\text{N}^+\text{R}^5_2\text{-C=N}$ ,  $\text{N=C-N}^+\text{R}^5_2$ ,  $\text{O-C=N}^+\text{R}^5$ ,  $\text{N}^+\text{R}^5\text{-C-O}$ ,  $\text{S-C=N}^+\text{R}^5$ ,  $\text{N}^+\text{R}^5\text{-C-S}$ ,  $\text{S-C=N}$ , or  $\text{N=C-S}$ ,

$\text{R}^1$ ,  $\text{R}^2$  and  $\text{R}^3$ , in each case independently of one another, are H or a substituent selected from the group consisting of substituted or unsubstituted  $\text{C}_{1-12}$ -alkyl, substituted or unsubstituted  $\text{C}_{1-12}$ -alkanoyl, substituted or unsubstituted  $\text{C}_{3-7}$ -cycloalkyl, substituted or unsubstituted  $\text{C}_{6-12}$ -aryl, substituted or unsubstituted  $\text{C}_{7-13}$ -aralkyl, substituted or unsubstituted  $\text{C}_{7-13}$ -alkaryl, substituted or unsubstituted  $\text{C}_{1-12}$ -alkoxy, substituted or unsubstituted  $\text{C}_{6-12}$ -aryloxy, substituted or unsubstituted  $\text{C}_{1-12}$ -hydroxyalkyl, substituted or unsubstituted heterocycle, substituted or unsubstituted  $\text{C}_{6-12}$ -aroyl,

hydroxyl, thiol, halogen, cyano, isocyano, nitro, ammonium, amino, phosphine, phosphine oxide, a sulfonic acid, a derivative of said sulfonic acid, carboxylic acid, a derivative of said carboxylic acid, a derivative of silicon, C<sub>2-12</sub>-alkynyl, C<sub>2-12</sub>-alkenyl, wherein the double or triple bonds of the C<sub>2-12</sub>-alkynyl and C<sub>2-12</sub>-alkenyl are optionally linked directly to the cycloquater skeleton or are optionally in the chain, a carbamate of the formula -NH-CO-OR<sup>7</sup>, a substituted urea of the formula -NR<sup>7</sup>-CO-NR<sup>7</sup><sub>2</sub>, an alkyl carbonate substituent of the formula -O-CO-OR<sup>7</sup>, a sulfinic acid of the formula -SO-OR<sup>7</sup>, a derivative of said sulfinic acid, a sulfoxide of the formula -SO-R<sup>7</sup>, a derivative of said sulfoxide, a phosphonic acid a salt of said phosphonic acid, an ester of said phosphonic acid, and an amide of said phosphonic acid;

R<sup>1</sup> and R<sup>2</sup> and/or R<sup>2</sup> and R<sup>3</sup>, in each case independently of one another, also optionally form unsubstituted or substituted fused ring systems comprising from 1 to 3 rings, which optionally comprise hetero atom groups, or optionally form unsubstituted or substituted alkylene groups which are optionally interrupted by hetero atom groups, wherein the fused ring systems are optionally substituted;

wherein the oxygen atoms in R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup> are optionally replaced by sulfur atoms,

~~optionally~~, on average from 0.05 to 100% of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> present in the molecule are not hydrogen,

or corresponding heterocyclic compounds wherein at least one group -CR<sup>1</sup>=, -CR<sup>2</sup>=, and -CR<sup>3</sup>= is replaced by -N=,

R<sup>5</sup>, in each case independently of one another, are H, unsubstituted or substituted C<sub>1-12</sub>-alkyl, C<sub>6-12</sub>-aryl, C<sub>7-13</sub>-alkylaryl, unsubstituted or substituted C<sub>1-12</sub>-alkanoyl, unsubstituted or substituted C<sub>7-13</sub>-aryloyl, oligoethylene glycol having 1 to 6 oxygen atoms, oligoethylene glycol ether having 1 to 6 oxygen atoms, imidazolymethyl or a corresponding radical wherein a nitrogen atom is substituted by a C<sub>1-12</sub>-alkyl radical and optionally carry a positive charge and a C-H group in the ring are optionally replaced by C-(C<sub>1-12</sub>-alkyl), or (1-C<sub>4-6</sub>-lactam)methyl, which are optionally C<sub>1-12</sub>-alkyl-substituted on the ring,

$R^7$ , in each case independently of one another, are H,  $C_{1-12}$ -alkyl or  $C_{6-12}$ -aryl.

Claim 2 (Currently Amended) The composition as claimed in claim 1, wherein the composition comprises the cyclic compound of the formula (I) or at least one metal complex of the cyclic compound,

wherein

X-Y-Z, in each case independently of one another, is O-C=N, N=C-O, NH-C=N, N=C-NH, S-C=N or N=C-S,

$R^1$ ,  $R^2$  and  $R^3$ , in each case independently of one another, are H or a substituent selected from the group consisting of substituted or unsubstituted  $C_{1-12}$ -alkyl, substituted or unsubstituted  $C_{1-12}$ -alkanoyl, substituted or unsubstituted  $C_{3-7}$ -cycloalkyl, substituted or unsubstituted  $C_{6-12}$ -aryl, substituted or unsubstituted  $C_{7-13}$ -aralkyl, substituted or unsubstituted  $C_{7-13}$ -alkaryl, substituted or unsubstituted  $C_{1-12}$ -alkoxy, substituted or unsubstituted  $C_{6-12}$ -aryloxy, substituted or unsubstituted  $C_{1-12}$ -hydroxyalkyl, substituted or unsubstituted heterocycle, substituted or unsubstituted  $C_{6-12}$ -aroyl, hydroxyl, thiol, halogen, cyano, isocyano, nitro, ammonium, amino, phosphine, phosphine oxide, a sulfonic acid, a derivative of said sulfonic acid, a carboxylic acid, a derivative of said carboxylic acid, and a derivative of silicon,

$R^1$  and  $R^2$  and/or  $R^2$  and  $R^3$ , in each case independently of one another, also optionally form unsubstituted or substituted fused ring systems comprising from 1 to 3 rings, which optionally comprise hetero atom groups, or optionally form unsubstituted or substituted alkylene groups which are optionally interrupted by hetero atom groups,

optionally on average from 0.01 to 12 of  $R^1$ ,  $R^2$  and  $R^3$  present in the molecule are not hydrogen,

or corresponding heterocyclic compounds wherein at least one group  $-CR^1=$ ,  $-CR^2=$  or  $-CR^3=$  is replaced by  $-N=$ .

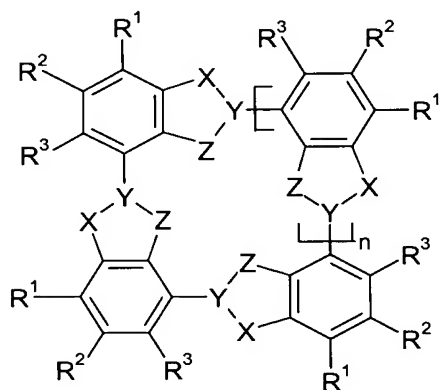
Claim 3 (Canceled).

Claim 4 (Previously Presented) The composition as claimed in claim 1, wherein the cyclic compound of the formula (I) is comprised in the composition in soluble, partly soluble or insoluble form in an application medium,

wherein the insoluble form optionally comprises solid solutions with other colorants.

Claim 5 (Previously Presented) The composition as claimed in claim 1, wherein all  $R^1$  are the same, all  $R^2$  are the same, and all  $R^3$  are the same.

Claim 6 (Currently Amended) A cyclic compound represented by formula (I) or a metal complex of the cyclic compounds or a complex of the cyclic compounds with a mineral acid,



wherein

$n$  is a number in the range from 1 to 7,

$X-Y-Z$ , in each case independently of one another, is  $O-C=N$ ,  $NR^5-C=N$ ,  $N=C-NR^5$ ,  $N^+R^5_2-C=N$ ,  $N=C-N^+R^5_2$ ,  $O-C=N^+R^5$ ,  $N^+R^5=C-O$ ,  $S-C=N^+R^5$ ,  $N^+R^5=C-S$ ,  $S-C=N$ , or  $N=C-S$ ,

$R^1$ ,  $R^2$  and  $R^3$ , in each case independently of one another, are H or a substituent selected from the group consisting of substituted or unsubstituted  $C_{1-12}$ -alkyl, substituted or unsubstituted  $C_{1-12}$ -alkanoyl, substituted or unsubstituted  $C_{3-7}$ -cycloalkyl, substituted or unsubstituted  $C_{6-12}$ -aryl,

substituted or unsubstituted C<sub>7-13</sub>-aralkyl, substituted or unsubstituted C<sub>7-13</sub>-alkaryl, substituted or unsubstituted C<sub>1-12</sub>-alkoxy, substituted or unsubstituted C<sub>6-12</sub>-aryloxy, substituted or unsubstituted C<sub>1-12</sub>-hydroxyalkyl, substituted or unsubstituted heterocycle, substituted or unsubstituted C<sub>6-12</sub>-aroyl, hydroxyl, thiol, halogen, cyano, isocyano, nitro, ammonium, amino, phosphine, phosphine oxide, a sulfonic acid, a derivative of said sulfonic acid, carboxylic acid, a derivative of said carboxylic acid, a derivative of silicon, C<sub>2-12</sub>-alkynyl, C<sub>2-12</sub>-alkenyl, wherein the double or triple bonds of the C<sub>2-12</sub>-alkynyl and C<sub>2-12</sub>-alkenyl are optionally linked directly to the cycloquater skeleton or are optionally in the chain, a carbamate of the formula -NH-CO-OR<sup>7</sup>, a substituted urea of the formula -NR<sup>7</sup>-CO-NR<sup>7</sup><sub>2</sub>, an alkyl carbonate substituent of the formula -O-CO-OR<sup>7</sup>, a sulfinic acid of the formula -SO-OR<sup>7</sup>, a derivative of said sulfinic acid, a sulfoxide of the formula -SO-R<sup>7</sup>, a derivative of said sulfoxide, a phosphonic acid, a salt of said phosphonic acid, an ester of said phosphonic acid, and an amide of said phosphonic acid;

R<sup>1</sup> and R<sup>2</sup> and/or R<sup>2</sup> and R<sup>3</sup>, in each case independently of one another, also optionally form unsubstituted or substituted fused ring systems comprising from 1 to 3 rings, which optionally comprise hetero atom groups, or optionally form unsubstituted or substituted alkylene groups which are optionally interrupted by hetero atom groups, wherein the fused ring systems are optionally substituted;

wherein the oxygen atoms in R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup> are optionally replaced by sulfur atoms,

~~optionally~~, on average from 0.05 to 100% of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> present in the molecule are not hydrogen,

or corresponding heterocyclic compounds wherein at least one group -CR<sup>1</sup>=, -CR<sup>2</sup>=, and -CR<sup>3</sup>= is replaced by -N=,

R<sup>5</sup>, in each case independently of one another, are H, unsubstituted or substituted C<sub>1-12</sub>-alkyl, C<sub>6-12</sub>-aryl, C<sub>7-13</sub>-alkylaryl, unsubstituted or substituted C<sub>1-12</sub>-alkanoyl, unsubstituted or substituted C<sub>7-13</sub>-aryloyl, oligoethylene glycol having 1 to 6 oxygen atoms, oligoethylene glycol ether having 1 to 6 oxygen atoms, imidazolymethyl or a corresponding radical wherein a nitrogen atom is substituted by a

C<sub>1-12</sub>-alkyl radical and optionally carry a positive charge and a C-H group in the ring are optionally replaced by C-(C<sub>1-12</sub>-alkyl), or (1-C<sub>4-6</sub>-lactam)methyl, which are optionally C<sub>1-12</sub>-alkyl-substituted on the ring,

R<sup>7</sup>, in each case independently of one another, are H, C<sub>1-12</sub>-alkyl or C<sub>6-12</sub>-aryl[[]],

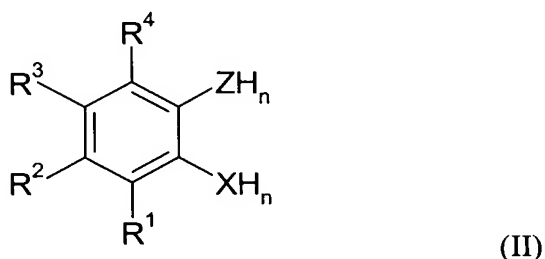
with the exception of cyclic compounds where

X-Y-Z is NH-C=N or N=C-NH,

R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are H or C<sub>1-6</sub>-alkyl with the proviso that on average from 0.05 to 100% of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> present in the molecule are not hydrogen.

Claim 7 (Previously Presented) A process for the preparation of a cyclic compound of the formula (I) as claimed in claim 6, the process comprising:

performing a cyclization of a compound of the formula (II)



optionally in the presence of metal salts, metal powders or Lewis acids as templates and condensing agents or

under dehydrating conditions,

wherein

R<sup>4</sup> is -COOH or a derivative thereof and

n in each case is 1 or 2, to obtain the stoichiometry,

wherein OH groups are optionally present as alkali metal salt or ammonium salt groups and/or

NH<sub>2</sub> groups are optionally present in protonated form or derivative form as -NO, -NO<sub>2</sub>, -N=N-aryl, =NOH, or =NH.

Claim 8 (Previously Presented) A process for the preparation of a complex of a cyclic compound, the process comprising:

preparing the cyclic compound by the process as claimed in claim 7 in the presence of metal salts or metal powders as templates.

Claim 9 (Previously Presented) A method of coloring an organic material, the process comprising:

applying the composition as claimed in claim 1 to the organic material.

Claim 10 (Previously Presented) A thermoplastic molding material, finish or coating composition comprising the composition as claimed in claim 1.

Claim 11 (Previously Presented) The composition as claimed in claim 1, wherein the composition is

a light absorber,  
a material for hole injection layers in OLEDs,  
a light-emitting compound in OLED,  
a synergistic agent for dispersing pigments or  
a synergistic agent for optical data storage.

Claim 12 (Previously Presented) The composition as claimed in claim 2, wherein the composition is

a light absorber,  
a material for hole injection layers in organic light-emitting diodes (OLED) or  
a synergistic agent for dispersing pigments,

Claim 13 (Previously Presented) The composition as claimed in claim 11, wherein the light absorber is a UV absorber and/or a visible-light absorber.

Claim 14 (Previously Presented) A process for the preparation of a complex of a cyclic compound, the process comprising:

reacting the cyclic compound as claimed in claim 6 with a metal salt or metal powder.

Claim 15 (New) The process according to claim 14, wherein the metal is selected from the group consisting of Li, Na, K, Rb, Cs, Fr, Be, Mg, Ca, Sr, Ba, Ra, Sc, Y, La, Ac, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, Re, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, B, Al, Ga, In, Tl, Si, Ge, Sn, Pb, As, Sb, Bi, Se, Te and Po.

Claim 16 (New) The process according to claim 15, wherein the metal is selected from the group consisting of Eu, Tb, Cr, Mn, Re, Fe, Ru, Os, Co, Ir, Pt, Cu, Au, Zn, Tl, Pb and Bi.

Claim 17 (New) The process according to claim 8, wherein the metal is selected from the group consisting of Li, Na, K, Rb, Cs, Fr, Be, Mg, Ca, Sr, Ba, Ra, Sc, Y, La, Ac, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, Re, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, B, Al, Ga, In, Tl, Si, Ge, Sn, Pb, As, Sb, Bi, Se, Te and Po.

Claim 18 (New) The process according to claim 17, wherein the metal is selected from the group consisting of Eu, Tb, Cr, Mn, Re, Fe, Ru, Os, Co, Ir, Pt, Cu, Au, Zn, Tl, Pb and Bi.

Claim 19 (New) The composition according to claim 1, wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are identical.



Claim 20 (New) The composition according to claim 1, wherein on average from 1 to 8 of  $R^1$ ,  $R^2$  and  $R^3$  present in the molecule are not hydrogen.

Claim 21 (New) The cyclic compound represented by formula (I), the metal complex of the cyclic compounds, and the mineral acid complex of the cyclic compounds according to claim 6, wherein on average from 1 to 8 of  $R^1$ ,  $R^2$  and  $R^3$  present in the molecule are not hydrogen.